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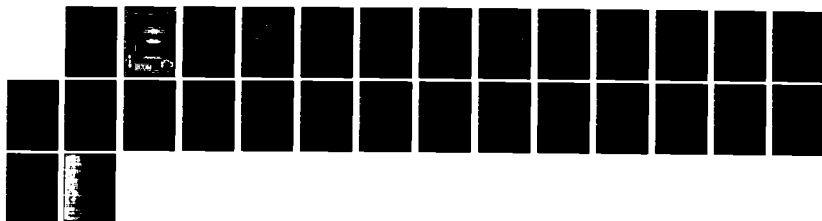
193188 MLRS MISSILE NUMBER BN-199 BN-185 BN-168 BN-144
BN-211 BN-213 ROUN. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATH. 04 MAR 83
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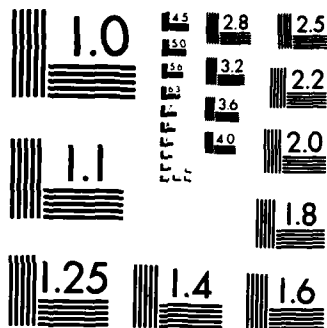
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) -Meteorological data gathered for the launching of the 19318B MLRS, Missile Number BN-199, BN-185, BN-168, BN-144, BN-211, BN-213, Round Number V-431/ OT-37 Thur V-436/OT-42 are presented in tabular form.		

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INTRODUCTION!!

193188 MURS, "Missile Numbers BU-199, BU-185, BU-190, BU-140, BU-211, and BU-213, Round Numbers V-431/OT-37 Thru V-436/OT-42, were launched from LC-33, White Sands Missile Range (USMR), New Mexico, at 1457:21, 1457:26, 1457:30, 1457:35, 1457:39, and 1457:44 MST, 4 Mar 83. The scheduled launch times were 1400 MST with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm-m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE

LC-33 1750 Meters

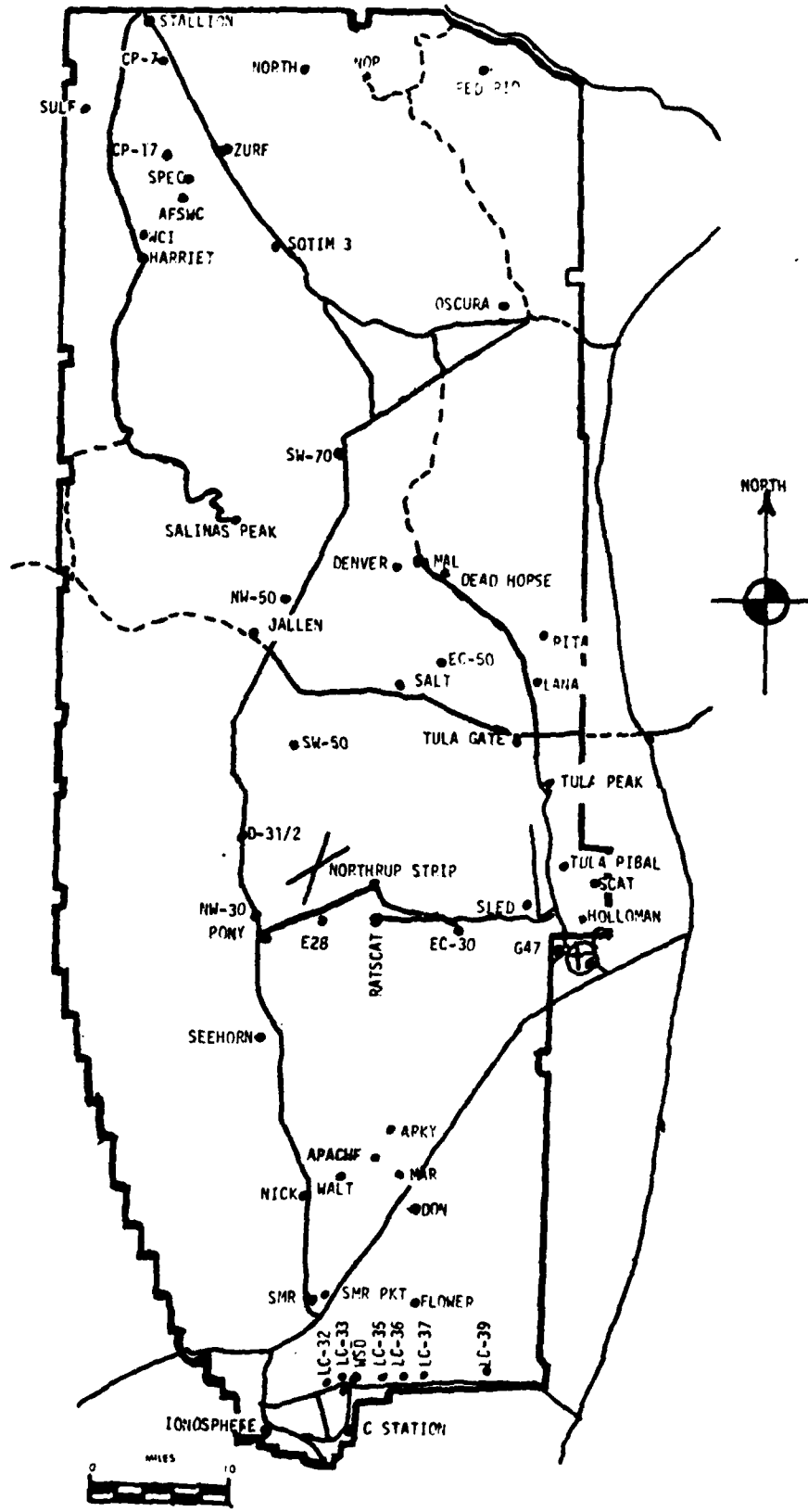
(2) Air structure data (rawinsonde) were collected at the following Net Sites:

SITE AND TIME

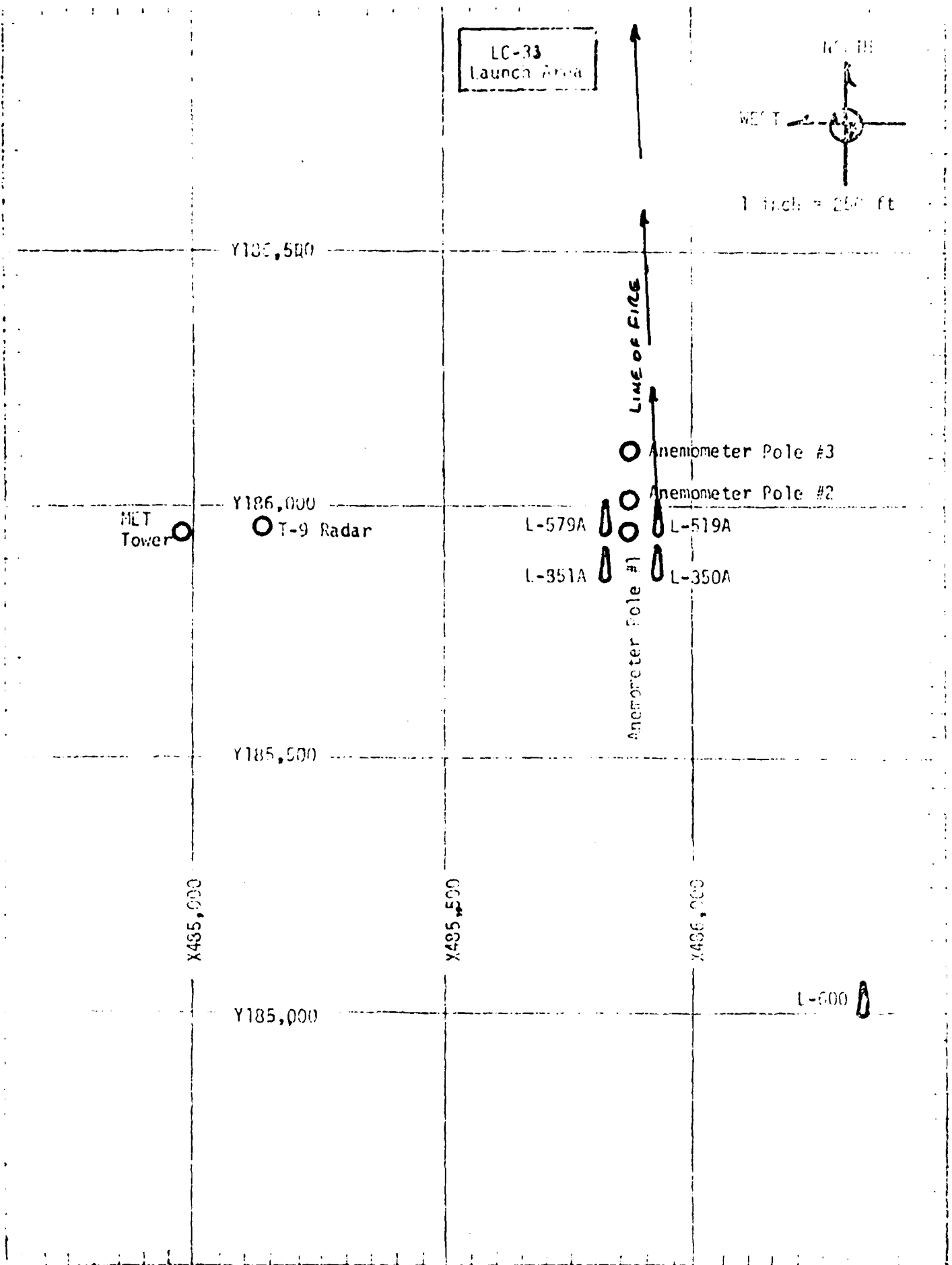
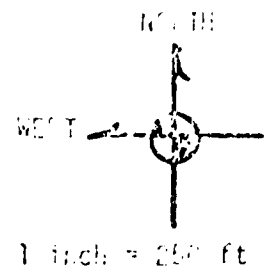
WSD 1100 MST
WSD 1231 MST
WSD 1341 MST
LC-37 1413 MST
WSD 1525 MST

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WSMR METEOROLOGICAL SITES



LC-33
Launch Area



PROJECT SURFACE OBSERVATION

STATION LC-33 L2A									
TABLE 1		DATE 04		Mar		83		H= 3995.00	
TIME		PRESSURE		TEMPERATURE		DEW POINT		RELATIVE HUMIDITY	
M --		mbs		OF		OF		%	
				OC		OC			
1458		982.5		12.6		1.3		46	

OBSERVATIONS TO VISIBILITY		CLOUDS				REMARKS	
		1st LAYER		2nd LAYER		3rd LAYER	
		AMT	TYPE	AMT	TYPE	AMT	TYPE
		HGT	HGT	HGT	HGT	HGT	HGT
		6	SC	2,500	1	AS	12,000

PSYCHROMETRIC COMPUTATION

TIME:	MST	1458	
DRY BULB TEMP.		12.6	
WET BULB TEMP.		6.9	
WET BULB DEPR.		5.7	
DEW POINT		1.3	
RELATIVE HUMID.		4.6	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	236	30	-30	248	22	-30	252	31
-20	239	29	-20	250	20	-20	252	29
-10	237	31	-10	251	22	-10	257	32
0.0	250	27	0.0	245	23	0.0	260	28
+10	243	31	+10	252	25	+10	258	25

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	272	30	-30	255	35
-20	261	29	-20	243	35
-10	275	24	-10	260	29
0.0	263	28	0.0	260	34
+10	270	27	+10	249	30

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	265	34	-30	263	30
-20	264	34	-20	264	30
-10	271	31	-10	252	30
0.0	271	33	0.0	250	34
+10	258	33	+10	255	34

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 4 March 1983

SITE: LC-33
 TIME: 1457 '1ST
 WSTM COORDINATES:
 X= 434,337.34
 Y= 184,124.44
 H= 3,975.57

SITE:
 TIME
 WSTM COORDINATES:
 X=
 Y=
 H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	255	28
150	255	28
210	255	28
270	255	28
330	256	29
390	257	29
500	259	30
650	266	29
800	270	28
950	273	27
1150	277	24
1350	279	31
1550	279	31
1750	282	27
2000	MISG	

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150		
210		
270		
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

AIMING COMPUTER NET MESSAGES

4 March 1983

WSD 1100 MST

METCM1324064

041800122865

00462012 28690365

01506015 28360855

02489019 28010329

03482023 27660789

04486026 27190742

05495032 26820696

06496039 26660653

07495034 26310623

08497035 25910574

09492039 25490537

WSD 1231 MST

METCM1324064

041950122865

00409012 28660865

01432030 28410854

02450020 28090829

03466021 27720789

04468023 27250742

05493022 26810697

06499034 26460653

07498030 26050612

08500039 25710573

09516031 25350537

WSD 1341 MST

METCM1324064

042070122864

00427018 28650864

01454022 28390853

02463032 28070828

03472031 27710788

04482032 27280741

05483042 26920696

06486033 26470653

07494036 26090612

08491041 25740573

09491042 25370536

LC-37 1413 MST

METCM1324063

042120124862

00267003 28720862

01327007 28410852

02410017 28180326

03435030 27820787

04467027 27340740

05463031 26370695

06497032 26440652

07503044 26060611

08502046 25780572

09495042 25410535

LC-37 1525 MST

METCM1324063

042240124862

00391007 28760362

01371022 78500851

02354007 28180826

03424013 27770787

04437026 27300739

05493025 26850694

06509029 26430551

07512032 26030610

08510037 25640571

09486040 25290534

STATION ALTITUDE 3489.00 FEET MSL
4 MAR. 63 1100 HRS. MST
ASCENSION NO. 117

SIGNIFICANT LEVEL DATA
0630020117
WHITE SANDS

GEODETIC COORDINATES
12.400000 LAT DEG
106.370333 LONG DEG

TABLE 6

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	TEMPERATURE DEWPOINT	REL. HUMIDITY PERCENT
MILLIBARS	MSL FLT	DEGREES	CENTIGRADE	
860.9	3489.0	13.0	4.4	56.0
850.0	4464.5	7.9	-0.8	54.0
782.6	6681.3	2.2	-1.1	79.0
770.1	7107.9	.7	-3.0	76.0
744.6	7993.3	-1.7	-2.8	92.0
700.0	9348.6	-5.2	-5.5	98.0
700.0	9598.1	-5.8	-9.7	74.0
684.6	10171.3	-5.8	-12.1	61.0
670.2	10375.4	-5.5	-14.5	49.0
660.0	11082.8	-6.1	-17.5	40.0
607.4	13232.2	-10.6	-22.4	37.0
548.0	15802.9	-17.1	-26.7	43.0
500.0	18038.3	-23.0	-27.6	66.0

STATION ALTITUDE 3489.00 FEET ASL
 4 MAR. 43
 ASCENSION NO. 117

LABORATORY LEVELS
 0630020117
 WHITE SANDS

GEODETIC COORDINATES
 12.400000 LAT NFG
 106.370333 LONG WFG

TABLE 8

PRESSURE	GEOPOTENTIAL	TEMPERATURE		WET-BULB	WIND DATA	
		AIR	DEWPOINT		DIRECTION	SPEED
MILLIBARS	FEET	DEGREES	CENTIGRADE	PERCENT	DEGREES (TN)	KNOTS
850.0	4461.	7.9	-0.8	54.	262.7	14.1
800.0	6091.	3.7	-0.8	72.	266.1	21.1
750.0	7797.	-1.2	-2.8	84.	271.7	25.8
700.0	9589.	-5.0	-9.7	74.	274.1	31.0
650.0	11494.	-7.0	-18.4	34.	278.8	30.5
600.0	13526.	-11.4	-22.9	34.	278.7	30.2
550.0	15693.	-16.9	-26.5	41.		
500.0	18014.	-23.0	-27.6	64.		

STATION ALTITUDE 3489.00 FEET MSL
 6 MAR. 83
 ASCENDING NO. 118

SIGNIFICANT LEVEL DATA
 063002011M
 WHITE SANDS

STODOLIC COORDINATES
 32.60043 LAT DEG
 106.37033 LONG DEG

TABLE 9

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
864.8	3984.0	12.8	2.6	50.0
850.0	4462.1	9.2	-1.2	48.0
794.3	6289.9	3.8	-2.4	64.0
736.4	8273.1	-1.9	-2.3	97.0
700.0	9604.5	-5.4	-5.7	98.0
672.7	10631.3	-7.7	-4.0	98.0
654.8	11321.0	-8.2	-4.5	94.0
637.1	12017.1	-11.1	-12.5	89.0
619.1	12739.2	-12.3	-14.4	60.0
559.2	15271.2	-17.5	-23.5	59.0
550.9	15638.9	-18.3	-23.2	65.0
526.4	16750.7	-20.7	-29.9	43.0
500.0	17994.3	-23.8	-39.4	21.0

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 43 1231 HRS MST
 ASCENDING NO. 114

UPPER AIR DATA
 0630020114
 WHITE SANDS

GEODETIC COORDINATES
 32-400431 AT DEG
 106-57033100 DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METER	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3994.0	864.8	12.8	50.0	1050.2	654.4	210.0	12.0	1.000268
4000.0	864.5	12.7	50.0	1050.1	654.7	210.3	12.0	1.000268
4500.0	848.8	9.1	48.3	1045.1	655.3	224.0	12.5	1.000269
5000.0	833.2	7.6	52.7	1031.3	653.6	236.2	13.6	1.000266
5500.0	817.9	6.1	57.1	1017.7	651.4	240.1	15.2	1.000263
6000.0	802.9	4.7	61.5	1004.3	650.1	253.9	17.2	1.000260
6500.0	788.0	3.2	67.5	990.9	648.4	260.1	19.4	1.000257
7000.0	773.3	1.8	75.8	977.3	646.8	261.9	20.7	1.000254
7500.0	758.8	.3	84.1	964.0	645.1	262.9	21.8	1.000251
8000.0	744.6	-1.1	92.5	950.9	643.4	263.8	22.9	1.000249
8500.0	730.5	-2.5	97.2	937.8	641.7	267.1	23.7	1.000245
9000.0	716.6	-3.8	97.5	924.6	640.1	270.6	24.7	1.000240
9500.0	702.9	-5.1	97.9	911.6	638.5	273.8	25.7	1.000235
10000.0	689.4	-6.3	98.0	898.1	637.1	277.3	26.6	1.000230
10500.0	676.1	-7.4	98.0	884.7	635.7	280.6	27.6	1.000216
11000.0	663.1	-8.0	98.0	869.4	634.0	282.5	29.0	1.000211
11500.0	650.2	-8.9	95.7	855.8	633.8	280.5	31.7	1.000207
12000.0	637.5	-11.0	89.2	846.1	631.2	274.0	33.9	1.000201
12500.0	625.9	-11.9	69.6	832.6	630.0	278.2	34.7	1.000195
13000.0	612.6	-12.8	59.9	819.2	628.8	278.5	35.8	1.000190
13500.0	600.5	-13.9	59.7	806.1	627.6	279.8	37.1	1.000187
14000.0	588.5	-14.9	59.5	793.3	626.3	280.4	39.3	1.000183
14500.0	576.8	-15.9	59.3	780.6	625.0	281.4	39.4	1.000180
15000.0	565.3	-16.9	59.1	768.2	623.4	283.3	35.8	1.000177
15500.0	554.0	-18.0	62.7	755.9	622.5	286.3	31.4	1.000174
16000.0	542.8	-19.1	57.9	743.9	621.1	288.4	29.4	1.000170
16500.0	531.8	-20.2	48.0	732.0	619.8	286.9	33.0	1.000167
17000.0	521.0	-21.3	38.6	720.5	618.3			1.000163
17500.0	510.3	-22.6	29.7	709.3	616.8			1.000160

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 43
 ASCENSION NO. 118

LABORATORY LEVELS
 00.30020114
 WHITE SANDS

GEODETIC COORDINATES
 32.44043 LAT NFG
 106.37033 LONG WFG

TABLE 11

PRESSURE GEOPOTENTIAL MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4459.	9.2	44.	223.0	14.4
800.0	6004.	4.4	62.	255.2	17.6
750.0	7804.	-6.	84.	263.4	22.4
700.0	9599.	-5.4	94.	274.5	25.9
650.0	11477.	-9.0	94.	280.5	31.7
600.0	13509.	-13.9	60.	274.9	37.2
550.0	15660.	-18.4	64.	287.5	24.9
500.0	17970.	-23.8	21.		

STATION ALTITUDE 3989.00 FEET MSL
4 MAR. 43 1341 HRS MST
ASCENSION NO. 119

SIGNIFICANT LEVEL DATA
0630020114
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT NFG
106.37033 LONG WFG

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
863.5	3989.0	12.8	1.8	47.0
850.0	4420.6	8.9	-1.2	49.0
826.2	5190.0	6.7	-1.4	56.0
777.7	6809.9	2.3	-3.2	67.0
756.6	7538.0	.4	-3.5	75.0
729.7	8488.7	-2.1	-4.1	86.0
700.0	9571.3	-3.8	-9.0	67.0
654.9	11284.7	-8.7	-12.3	75.0
616.9	12798.3	-12.2	-12.6	97.0
587.9	14003.7	-14.7	-15.1	97.0
500.0	17970.1	-23.4	-23.7	97.0

STATION ALTITUDE 3989.00 FEET MSL
4 MAR. 43 1341 HRS MST
ASCENSION NO. 119

UPPER AIR DATA
0630020114
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT NFG
106.37033 LON NFG

TABLE 14

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		WFL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
3989.0	863.5	12.8	1.8	47.0	1048.8	659.8	240.0	18.1	1.000266
4000.0	863.2	12.7	1.7	47.1	1048.7	659.7	240.1	18.1	1.000266
4500.0	847.5	8.7	-1.2	49.7	1045.0	654.8	246.3	19.6	1.000259
5000.0	832.0	7.2	-1.4	54.3	1031.1	653.2	251.5	21.4	1.000256
5500.0	816.7	5.9	-1.7	58.1	1017.2	651.5	255.9	23.3	1.000253
6000.0	801.6	4.5	-2.2	61.5	1003.3	649.9	259.7	25.3	1.000249
6500.0	786.8	3.1	-2.8	64.9	989.6	648.3	262.8	27.4	1.000245
7000.0	772.1	1.8	-3.2	69.1	976.0	646.8	265.5	29.5	1.000242
7500.0	757.7	.5	-3.5	74.6	962.3	645.2	267.9	31.8	1.000238
8000.0	743.4	-8	-3.8	80.3	948.7	643.7	269.3	32.5	1.000235
8500.0	729.4	-2.1	-4.2	85.8	935.3	642.1	270.5	32.7	1.000232
9000.0	715.5	-2.9	-6.4	77.0	920.5	641.1	271.7	32.9	1.000225
9500.0	701.9	-3.7	-8.7	68.3	905.9	640.1	272.8	33.0	1.000218
10000.0	688.4	-5.0	-9.8	69.0	893.0	638.4	273.4	33.7	1.000214
10500.0	675.2	-6.5	-10.8	71.3	880.6	636.7	273.9	34.5	1.000211
11000.0	662.2	-7.9	-11.7	73.7	868.4	635.0	274.3	35.3	1.000207
11500.0	649.4	-9.2	-12.3	78.1	855.8	633.4	274.7	36.1	1.000204
12000.0	636.7	-10.4	-12.3	85.4	842.8	632.0	275.1	36.8	1.000201
12500.0	624.2	-11.5	-12.5	92.7	829.9	630.6	275.5	37.4	1.000198
13000.0	611.9	-12.6	-13.0	97.0	817.1	629.3	275.9	37.9	1.000195
13500.0	599.8	-13.7	-14.0	97.0	804.2	628.0	276.3	38.5	1.000191
14000.0	588.0	-14.7	-15.1	97.0	791.6	626.7	276.6	39.1	1.000187
14500.0	576.1	-15.8	-16.2	97.0	778.9	625.3	276.6	39.7	1.000183
15000.0	564.5	-16.9	-17.2	97.0	766.5	624.0	276.5	40.4	1.000180
15500.0	553.1	-18.0	-18.3	97.0	754.3	622.6	276.5	41.0	1.000176
16000.0	541.9	-19.1	-19.4	97.0	742.3	621.3			1.000173
16500.0	530.9	-20.2	-20.5	97.0	730.5	619.4			1.000170
17000.0	520.2	-21.3	-21.6	97.0	718.9	618.5			1.000167
17500.0	509.7	-22.4	-22.7	97.0	707.5	617.2			1.000164

STATION ALTITUDE 3489.00 FFFY MSL
4 MAR. 43
ASCENSION NO. 119

MANDATORY 15VFLS
0630820119
WHITE SANDS

GEODETRIC COORDINATES
32.40043 LAT NFG
106.37033 LON NFG

TABLE 14

PRESSURE GFOPOTENTIAL		TEMPERATURE		WFL HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4418.	8.9	-1.2	49.	245.4	19.4	
800.0	6051.	4.4	-2.3	62.	260.0	25.5	
750.0	7762.	-0.2	-3.6	74.	268.8	32.5	
700.0	9562.	-3.8	-9.0	67.	273.0	33.1	
650.0	11464.	-9.1	-12.3	78.	274.6	30.1	
600.0	13480.	-13.6	-14.0	97.	276.3	38.5	
550.0	15633.	-18.3	-18.6	97.			
500.0	17946.	-23.4	-23.7	97.			

GEODETIC COORDINATES
32.40175 LAT NFG
106.31232 LON NFG

SIGNIFICANT LEVEL DATA
06301A0032
LC-37

STATION ALTITUDE 4051.37 FFFT MSL
4 MAR. 63 1413 HRS MST
ASCENSION NO. 32

TABLE 15

PRESSURE MILLIHARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		WFL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
862.0	4051.4	13.1	1.5	45.0
855.9	4246.4	10.2	-1.8	43.0
850.0	4435.3	9.8	-1.9	44.0
830.4	5070.1	8.3	-1.8	49.0
763.2	7335.1	2.1	-4.2	63.0
716.6	8992.3	-2.9	-4.5	89.0
700.0	9601.5	-4.4	-5.9	89.0
662.4	11020.8	-8.7	-9.0	98.0
653.2	11377.7	-8.4	-8.5	99.0
636.0	12055.6	-10.9	-11.7	94.0
593.0	13813.2	-14.5	-14.6	99.0
584.6	14168.9	-14.5	-14.7	98.0
543.0	15996.6	-18.1	-18.7	95.0
534.8	16369.7	-19.4	-20.4	92.0
500.0	18000.2	-24.0	-26.3	81.0

GEODETIC COORDINATES
32°40'17.5" LAT NFG
106°31'23.9" LON NFG

UPPER AIR DATA
0630180032
LC-37

TABLE 16

STATION ALTITUDE 4051.37 FFFT MSL
4 MAR. 43 1413 HRS MST
ASCENSION NO. 32

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
4051.4	862.0	13.1	1.5	45.0	1045.9	660.1	150.0	8.0	1.000264
4500.0	848.0	9.6	-1.8	44.5	1042.1	655.9	177.0	6.9	1.000257
5000.0	832.5	8.5	-1.8	48.4	1027.4	654.6	208.0	7.8	1.000255
5500.0	817.2	7.1	-2.1	51.7	1013.3	653.0	228.1	10.3	1.000251
6000.0	802.1	5.8	-2.6	54.7	999.5	651.4	239.5	13.6	1.000247
6500.0	787.3	4.4	-3.2	57.8	986.0	649.8	246.3	17.2	1.000243
7000.0	772.8	3.0	-3.8	60.9	972.6	648.1	250.7	21.0	1.000240
7500.0	758.4	1.6	-4.1	65.6	959.5	646.5	253.8	24.8	1.000236
8000.0	744.1	.1	-4.1	73.4	946.6	644.7	256.0	28.7	1.000234
8500.0	730.1	-1.4	-4.2	81.3	933.9	642.9	258.2	29.2	1.000231
9000.0	716.4	-2.9	-4.5	89.0	921.4	641.2	260.5	28.4	1.000228
9500.0	702.7	-4.2	-5.7	89.0	908.1	639.6	262.9	27.7	1.000223
10000.0	689.2	-5.6	-6.8	91.5	895.6	637.9	266.3	27.9	1.000219
10500.0	676.0	-7.1	-7.8	94.7	883.5	636.0	270.2	29.2	1.000215
11000.0	662.9	-8.6	-8.9	97.9	871.5	634.2	273.8	30.5	1.000211
11500.0	650.1	-8.9	-9.1	98.1	855.3	633.9	277.5	33.6	1.000207
12000.0	637.4	-10.7	-11.4	94.4	844.8	631.6	280.6	37.0	1.000202
12500.0	624.8	-11.8	-12.4	95.3	831.7	630.2	282.0	40.2	1.000198
13000.0	612.5	-12.8	-13.2	96.7	818.6	629.0	282.5	43.4	1.000195
13500.0	600.4	-13.9	-14.1	98.1	805.7	627.7	282.8	45.7	1.000191
14000.0	588.6	-14.5	-14.7	98.5	791.7	626.9	282.7	46.9	1.000187
14500.0	576.8	-15.2	-15.5	97.5	777.9	626.1	282.6	47.6	1.000184
15000.0	565.3	-16.1	-16.5	96.6	765.4	624.9	282.2	46.3	1.000180
15500.0	554.0	-17.1	-17.6	95.8	753.0	623.7	281.8	45.0	1.000177
16000.0	542.9	-18.1	-18.7	95.0	740.9	622.5	280.3	44.5	1.000173
16500.0	531.9	-19.8	-20.8	91.1	730.7	620.4	278.6	44.1	1.000170
17000.0	521.1	-21.2	-22.7	87.7	719.9	618.6			1.000166
17500.0	510.4	-22.6	-24.5	84.4	709.2	616.9			1.000163
18000.0	500.0	-24.0	-26.3	81.0	698.7	615.1			1.000160

STATION ALTITUDE 4051.37 FEET MS
 4 MAR. 83 1413 HRS MST
 ASCENSION NO. 32

MANDATORY LEVELS
 0630180032
 LC-37

GEODETIC COORDINATES
 32.40175 LAT NFG
 106.31232 LON NFG

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4432.	9.8	-1.9	44.	172.5	7.0
800.0	6073.	5.6	-2.7	55.	240.7	14.1
750.0	7790.	.7	-4.1	70.	255.2	27.1
700.0	9592.	-4.4	-5.9	89.	263.4	27.6
650.0	11491.	-8.9	-9.1	98.	277.5	33.6
600.0	13505.	-13.9	-14.1	94.	282.8	45.7
550.0	15662.	-17.5	-18.0	96.	281.3	44.8
500.0	17976.	-24.0	-26.3	81.		

STATION ALTITUDE 4051.37 FFFT MSL
4 MAR. 83 1525 HRS MST
ASCENSION NO. 33

SIGNIFICANT LEVEL DATA
06301400.33
LC-37

GEOPTIC COORDINATES
32.40175 LAT NFG
106.31232 LON NFG

TABLE 13

PRESSURE MILLIHARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
861.5	4051.4	13.4	2.0	46.0
850.0	4420.7	10.2	-9	46.0
794.0	6264.4	4.5	-1.7	64.0
773.0	6979.6	2.4	-1.6	75.0
744.0	7990.6	-0.6	-1.7	92.0
700.0	9581.2	-4.7	-5.7	93.0
656.9	11213.8	-8.8	-9.1	98.0
598.9	13544.5	-14.4	-14.8	97.0
590.5	13896.3	-15.2	-15.7	96.0
582.3	14243.7	-15.6	-16.5	93.0
555.2	15418.9	-18.9	-22.7	72.0
538.6	16161.2	-19.9	-21.6	86.0
515.9	17207.1	-22.3	-25.4	76.0
500.0	17961.8	-23.6	-29.0	61.0

STATION ALTITUDE 4051.37 FEET MSL
4 MAR. 63 1525 HRS MST
ASCENSION NO. 33

UPPER AIR DATA
06301H0033
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 19

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INFLX OF REFRACTION
4051.4	861.5	13.4	46.0	1044.1	660.5	220.0	7.0	1.000265
4500.0	847.5	10.0	46.8	1040.2	656.3	225.7	8.4	1.000259
5000.0	832.0	8.4	51.7	1026.7	654.5	230.1	10.1	1.000256
5500.0	816.8	6.9	56.5	1013.5	652.8	233.2	11.8	1.000253
6000.0	801.8	5.3	61.4	1000.5	650.9	235.6	13.5	1.000250
6500.0	787.0	3.8	67.6	987.4	649.2	237.4	15.2	1.000247
7000.0	772.4	2.3	75.3	974.1	647.5	245.0	16.8	1.000244
7500.0	757.9	.9	83.8	961.0	645.8	251.3	18.6	1.000242
8000.0	743.7	-6	92.0	948.1	644.0	256.5	20.6	1.000239
8500.0	729.6	-1.9	92.3	934.7	642.4	261.2	21.8	1.000234
9000.0	715.8	-3.2	92.6	921.5	640.8	265.6	22.8	1.000229
9500.0	702.2	-4.5	92.9	908.5	639.3	269.6	23.9	1.000224
10000.0	688.7	-5.8	94.3	895.4	637.7	273.2	25.1	1.000219
10500.0	675.4	-7.0	95.8	882.4	636.2	277.0	26.3	1.000215
11000.0	662.4	-8.3	97.3	869.6	634.6	280.5	27.6	1.000211
11500.0	649.5	-9.5	97.9	856.7	633.1	283.7	29.0	1.000207
12000.0	636.7	-10.7	97.7	843.8	631.6	286.1	30.4	1.000203
12500.0	624.2	-11.9	97.4	831.1	630.2	286.8	31.3	1.000198
13000.0	612.0	-13.1	97.2	818.7	628.7	287.4	32.2	1.000195
13500.0	600.0	-14.3	97.0	806.4	627.2	287.7	33.3	1.000191
14000.0	588.0	-15.3	95.1	793.6	625.9	287.4	34.8	1.000187
14500.0	576.3	-16.3	88.4	780.9	624.6	287.2	36.2	1.000183
15000.0	564.7	-17.7	79.5	769.6	622.9	285.2	37.5	1.000178
15500.0	553.4	-19.0	73.5	758.0	621.3	282.7	38.7	1.000175
16000.0	542.2	-19.7	83.0	744.6	620.5	279.3	40.0	1.000172
16500.0	531.1	-20.7	82.8	732.4	614.2	273.7	41.4	1.000169
17000.0	520.3	-21.8	78.0	720.8	617.8			1.000166
17500.0	509.7	-22.8	70.2	708.9	616.6			1.000162

STATION ALTITUDE 4051.37 FFFFT MSL
4 MAR. 83 1525 HRS MST
ASCENSION NO. 33

MANDATORY LEVELS
0630180033
LC-37

GEODETRIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 20

PRESSURE GFOPOTENTIAL		TEMPERATURE		WFL HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4418.	10.2	-9.9	40.		224.8	8.2
800.0	6058.	5.1	-1.5	62.		235.8	13.7
750.0	7772.	.0	-1.6	88.		254.3	19.7
700.0	9572.	-4.7	-5.7	93.		270.2	24.1
650.0	11471.	-9.4	-9.7	98.		283.0	28.9
600.0	13483.	-14.3	-14.7	97.		287.7	33.3
550.0	15630.	-19.2	-22.3	70.		282.1	39.1
500.0	17937.	-23.6	-29.0	61.			

END

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6-83

DTIC